

## Claims

1. An information recording device for recording three-dimensional information measured with a measuring device which measures the three-dimensional information on a body, comprising:

storage means for storing measured data based on the three-dimensional information measured by said measuring device and protection information for protecting said measured data from being read out; and

interface means for performing interface processing of storing the measured data based on the three-dimensional information output from said measuring device in said storage means and of reading out the measured data stored in said storage means to provide an external device.

2. The information recording device according to Claim 1, wherein

said protection information is enciphered.

3. The information recording device according to Claim 1, wherein

said protection information is information for specifying a person having a body of the three-dimensional information.

4. The information recording device according to Claim 3, wherein

said protection information is information showing the body characteristics of the person having the body of the three-dimensional information.

5. The information recording device according to Claim 4, wherein

said protection information is used as texture data of the three-dimensional information.

6. The information recording device according to Claim 4, wherein

said protection information is finger print information on the person having the body of the three-dimensional information.

7. The information recording device according to Claim 4, wherein

said protection information is voice information on the person having the body of the three-dimensional information.

8. The information recording device according to Claim 3, wherein

said protection information is a password set by the person having the body of three-dimensional information.

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9. The information recording device according to Claim 1,  
wherein

said information recording device is a portable device.

10. The information recording device according to Claim 1,  
wherein

said storage means is a semiconductor memory.

11. The information recording device according to Claim 1,  
wherein

the three-dimensional information includes three-dimensional  
shape information and texture information on the body.

12. The information recording device according to Claim 1,  
wherein

said measured data includes parameters produced by comparing  
a standard three-dimensional model with the three-dimensional  
information.

13. The information recording device according to Claim 1,  
wherein

said measured data is hierarchically stored every part of the  
body.

14. The information recording device according to Claim 13,  
wherein

said measured data is hierarchically stored in accordance  
with the details of the parts of the body.

15. The information recording device according to Claim 1,  
wherein

said interface means receives the measured data from said  
measuring device through a communication circuit and provides the  
measured data for an external device through the communication  
circuit.

16. A measuring device for measuring three-dimensional  
information on a body and for outputting measured data based on  
the three-dimensional information to an information recording  
device, comprising:

measuring means for measuring the three-dimensional  
information on the body;

input means for inputting protection information for  
protecting the measured data based on the three-dimensional  
information on the body from being read out from said information  
recording device; and

interface means for outputting the measured data based on the  
three-dimensional information measured by said measuring means and

the protection information input with said input means to said information recording device.

17. The measuring device according to Claim 16, further comprising:

storage means for storing data of standard three-dimensional models; and

producing means for producing feature parameters by comparing the three-dimensional information measured by said measuring means with data of the standard three-dimensional model, wherein

said interface means outputs the feature parameters and the protection information to said information recording device.

18. The measuring device according to Claim 16, wherein

said input means inputs information for specifying a person having a body of the three-dimensional information as protection information.

19. The measuring device according to Claim 18, wherein

said input means inputs information showing body characteristics of the person having the body of the three-dimensional information as the protection information.

20. The measuring device according to Claim 19, wherein

said input means inputs said protection information as texture data of the three-dimensional information.

21. The measuring device according to Claim 19, wherein  
said input means inputs finger print information on the person having the body of the three-dimensional information as the protection information.

22. The measuring device according to Claim 19, wherein  
said input means inputs voice information on the person of the body of the three-dimensional information as the protection information.

23. The measuring device according to Claim 18, wherein  
said input means inputs a password set by the person having the body of the three-dimensional information as the protection information.

24. The measuring device according to Claim 16, wherein  
said interface means is so constituted that said information recording device can be attached/detached.

25. The measuring device according to Claim 16, wherein

said measuring means measures the three-dimensional information and texture data about the body as the three-dimensional information.

26. The measuring device according to Claim 16, wherein said interface means provides said information recording device with the measured data and the protection information through a communication circuit.

27. A measuring method of measuring three-dimensional information on a body and of outputting measured data based on the three-dimensional information to an information recording device, comprising:

a measuring step of measuring three-dimensional information on the body;

an input step of inputting protection information for protecting the measured data based on the three-dimensional information on the body from being read out from said information recording device; and

an output step of outputting the measured data based on the three-dimensional information measured by said measuring step and the protection information input at said input step to said information recording device.

28. The measuring method according to Claim 27, further comprising

a producing step of producing feature parameters by comparing the three-dimensional information measured by said measuring step with standard three-dimensional model data stored in a storage unit, wherein

said output step outputs the feature parameters and the protection information to said information recording device.

29. The measuring method according to Claim 27, wherein

said input step inputs information for specifying a person having the body of the three-dimensional information as the protection information.

30. The measuring method according to Claim 29, wherein

said input step inputs information showing the body characteristics of the person having the body of the three-dimensional information as the protection information.

31. The measuring method according to Claim 30, wherein

said input step inputs the protection information as texture data of the three-dimensional information.

32. The measuring method according to Claim 30, wherein



said input step inputs finger print information on the person having the body of the three-dimensional information as the protection information.

33. The measuring method according to Claim 30, wherein  
said input step inputs voice information on the person having the body of the three-dimensional information as the protection information.

34. The measuring method according to Claim 29, wherein  
said input step inputs a password set by the person having the body of the three-dimensional information as the protection information.

35. The measuring method according to Claim 27, wherein  
said output step outputs the measured data and the protection information to said information recording device which is so constructed as to be attached/detached to/from an information processing device which executes said measuring method.

36. The measuring method according to Claim 27, wherein  
said measuring step measures the three-dimensional information and texture data about the body as the three-dimensional information.

37. The measuring method according to Claim 27, wherein  
said output step provides the measured data and the  
protection information for said information recording device  
through a communication circuit connected to an information  
processing device which executes said measuring method.

38. An information providing medium for measuring three-  
dimensional information on a body and for providing an information  
processing device with control information for outputting measured  
data based on the three-dimensional information to an information  
recording device, wherein:

said control information includes:

a measuring command to measure the three-dimensional  
information on the body;

an input command to input protection information for  
protecting the measured data based on the three-dimensional  
information on the body from being read out from said  
information recording device; and

an output command to output the measured data based on  
the three-dimensional information measured based on said  
measuring command and the protection information input based  
on said input command.

39. The information providing medium according to Claim 38,  
wherein:

the control information further includes a producing command to produce feature parameters by comparing the three-dimensional information measured based on said measuring command with the standard three-dimensional model data stored in a storage unit; and

said output command is a command to output the feature parameters and the protection information to said information recording device.

40. The information providing medium according to Claim 38, wherein

said input command is a command to input information for specifying the person having the body of the three-dimensional information as the protection information.

41. The information providing medium according to Claim 40, wherein

said input command is a command to input information showing the body characteristics of the person having the body of the three-dimensional information as the protection information.

42. The information providing medium according to Claim 41, wherein

said input command is a command to input the protection information as texture data of the three-dimensional information.

43 The information providing medium according to Claim 41,  
wherein

said input command is a command to input finger print  
information of the person having the body of the three-dimensional  
information as the protection information.

44. The information providing medium according to Claim 41,  
wherein

said input command is a command to input voice information of  
the person having the body of the three-dimensional information as  
the protection information.

45. The information providing medium according to Claim 40,  
wherein

said input command is a command to input a password set by  
the person having the body of the three-dimensional information as  
the protection information.

46. The information providing medium according to Claim 38,  
wherein

said output command is a command to output the measured data  
and the protection information to said information recording  
device which is so constructed as to be attached/detached to/from

an information processing device which executes the control information.

47. The information providing medium according to Claim 38, wherein

said measuring command is a command to measure three-dimensional shape information and texture information on the body as the three-dimensional information.

48. The information providing medium according to Claim 38, wherein

said output command is a command to provide the measured data and the protection information for said information recording device through a communication circuit connected to an information processing device which executes said control information.

49. An information processing device for reading out measured data from an information recording device which records the measured data based on three-dimensional information on a body and protection information for protecting the measured data from being read out, and for performing prescribed processing, said information processing device comprising:

interface means for performing interface processing to read out the measured data and the protection information from said information recording device;

input means for inputting authentication information for authenticating the reading-out of the measured data from said information recording device;

authenticating means for reading out the protection information from said information recording device through said interface means and for performing authentication processing using the authentication information input by said input means;

control means for controlling the reading-out of the measured data from said information recording device in accordance with the authentication result by said authenticating means; and

processing means for performing prescribed processing utilizing the measured data which is read out from said information recording device through said interface means under the control of said control means.

50. The information processing device according to Claim 49, further comprising

storage means for recording standard three-dimensional model data, wherein:

the measured data includes feature parameters produced by being compared with a standard three-dimensional model; and

said processing means performs prescribed processing based on data produced by applying the feature parameters read out from said information recording device to the standard three-dimensional model data.

51. The information processing device according to Claim 50,  
wherein

said storage means stores model data different from the  
standard three-dimensional model which is used to produce the  
feature parameters recorded with said information recording device,  
as the standard three-dimensional model data.

52. The information processing device according to Claim 49,  
wherein

said input means inputs information for specifying a person  
having the body of the three-dimensional information as  
authentication information.

53. The information processing device according to Claim 52,  
wherein

said input means inputs information showing the body  
characteristics of the person having the body of the three-  
dimensional information as the authentication information.

54. The information processing device according to Claim 53,  
wherein

said input means inputs the authentication information as  
texture data of the three-dimensional information.

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55. The information processing device according to Claim 53,  
wherein

said input means inputs finger print information of the  
person having the body of the three-dimensional information as the  
authentication information.

56. The information processing device according to Claim 53,  
wherein

said input means inputs voice information of the person  
having the body of the three-dimensional information as the  
authentication information.

57. The information processing device according to Claim 52,  
wherein

said input means inputs a password set by the person having  
the body of the three-dimensional information as the  
authentication information.

58. The information processing device according to Claim 49,  
wherein

said interface means is so constructed that said information  
recording device can be attached/detached.

59. The information processing device according to Claim 49,  
wherein



said measured data includes three-dimensional shape information and texture information on the body.

60. The information processing device according to Claim 49, wherein

said interface means receives the measured data and the protection information from said information recording device through an communication circuit.

61. The information processing device according to Claim 49, wherein:

said information recording device hierarchically stores the measured data every part of the body; and

said processing means selects and utilizes any hierarchy of measured data out of the measured data.

62. The information processing device according to Claim 49, wherein:

said information recording device hierarchically stores the measured data in accordance with the details of the parts of the body; and

said processing means selects and utilizes any hierarchy of measured data out of the measured data.

63 The information processing device according to Claim 49,  
wherein

said control means performs control to delete the measured data recorded with said information recording device, when said authenticating means detects the dishonest authentication result a predetermined number of times.

64. An information processing method of reading out measured data from an information recording device which records the measured data based on three-dimensional information on a body and protection information for protecting the measured data from being read out, to perform prescribed processing, said information processing method comprising:

an input step of inputting authentication information for authenticating the reading-out of the measured data from said information recording device;

an authenticating step of reading out the protection information from said information recording device and of performing authentication processing using the authentication information input at said input step;

a control step of controlling the reading-out of the measured data from said information recording device in accordance with the authentication result of said authenticating step; and

a processing step of performing prescribed processing using the measured data read out from said information recording device under the control of said control step.

65. The information processing method according to Claim 64, wherein:

said measured data includes feature parameters produced by being compared with a standard three-dimensional model; and

said processing step performs prescribed processing based on data produced by applying the feature parameters read out from said information recording device to the standard three-dimensional model data stored in a storage unit.

66. The information processing method according to Claim 65, wherein

the standard three-dimensional model data is model data different from the standard three-dimensional model used to produce the feature parameters recorded with said information recording device.

67. The information processing method according to Claim 64, wherein

said input step inputs information for specifying a person having the body of the three-dimensional information as the authentication information.

68. The information processing method according to Claim 67,  
wherein

said input step inputs information showing the body characteristics of the person having the body of the three-dimensional information as the authentication information.

69. The information processing method according to Claim 68,  
wherein

said input step inputs the authentication information as texture data of the three-dimensional information.

70. The information processing method according to Claim 68,  
wherein

said input step inputs finger print information on the person having the body of the three-dimensional information as the authentication information.

71. The information processing method according to Claim 68,  
wherein

said input step inputs voice information on the person having the body of the three-dimensional information as the authentication information.

72. The information processing method according to Claim 67,  
wherein

said input step inputs a password set by the person having  
the body of the three-dimensional information as the  
authentication information.

73. The information processing method according to Claim 64,  
wherein

said control step controls the reading-out of the measured  
data from said information recording device which is so  
constructed as to be attached/detached to/from an information  
processing device which executes said information processing  
method.

74. The information processing method according to Claim 64,  
wherein

said measured data includes three-dimensional shape  
information and texture information on the body.

75. The information processing method according to Claim 64,  
wherein

said control step receives the measured data from said  
information recording device through a communication circuit  
connected to an information processing device which executes said  
information processing method.

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76. The information processing method according to Claim 64,  
wherein

said processing step selects and utilizes any hierarchy of  
measured data out of the measured data hierarchically stored every  
part of the body in said information recording device.

77. The information processing method according to Claim 64,  
wherein

said processing step selects and utilizes any hierarchy of  
measured data out of the measured data hierarchically stored in  
accordance with the details of the parts of the body in said  
information recording device.

78. The information processing method according to Claim 64,  
wherein

said control step performs control to delete the measured  
data recorded with said information recording device, when said  
authenticating step detects the dishonest authentication result a  
predetermined number of times.

79. An information providing medium for reading out measured data  
from an information recording device which records the measured  
data based on three-dimensional information on a body and  
protection information for protecting the measured data from being

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read out, and for providing an information processing device with control information for performing prescribed processing, wherein:

said control information includes:

an input command to input authentication information for authenticating the reading-out of the measured data from said information recording device;

an authenticating command to read out the protection information from said information recording device and to perform authentication processing utilizing the authentication information input based on said input command;

a control command to control the reading-out of the measured data from said information recording device in accordance with the authentication result based on the authenticating command; and

a processing command to perform prescribed processing utilizing the measured data read out from said information recording device under the control of said control command.

80. The information providing medium according to Claim 79, wherein:

the measured data includes feature parameters produced by being compared with a standard three-dimensional model; and

said processing command is a command to perform prescribed processing based on data produced by applying the feature

parameters read out from said information recording device to the standard three-dimensional model data stored in a storage unit.

81. The information providing medium according to Claim 80, wherein

the standard three-dimensional model data is model data different from the standard three-dimensional model used to produce the feature parameters stored in said information recording device.

82. The information providing medium according to Claim 79, wherein

said input command is a command to input information for specifying the person having the body of the three-dimensional information as the authentication information.

83. The information providing medium according to Claim 82, wherein

said input command is a command to input information showing the body characteristics of the person having the body of the three-dimensional information as the authentication information.

84. The information providing medium according to Claim 83, wherein



said input command is a command to input the authentication information as texture data of the three-dimensional information.

85. The information providing medium according to Claim 83, wherein

said input command is a command to input finger print information on the person having the body of the three-dimensional information as the authentication information.

86. The information providing medium according to Claim 83, wherein

said input command is a command to input voice information on the person having the body of the three-dimensional information as the authentication information.

87. The information providing medium according to Claim 82, wherein

said input command is a command to input a password set by the person having the body of the three-dimensional information as the authentication information.

88. The information providing medium according to Claim 79, wherein

said control command is a command to control the reading-out of the measured data from said information recording device which

is so constructed as to be attached/detached to/from an information processing device which executes the control information.

89. The information providing medium according to Claim 79, wherein

said measured data includes three-dimensional shape information and texture information on the body.

90. The information providing medium according to Claim 79, wherein

said control command is a command to receive the measured data from said information recording device through a communication circuit connected to an information processing device which executes the control information.

91. The information providing medium according to Claim 79, wherein

said processing command is a command to select and utilize any hierarchy of measured data out of the measured data hierarchically stored in said information recording device every part of the body.

92. The information providing medium according to Claim 79, wherein

said processing command is a command to select and utilize any hierarchy of measured data out of the measured data hierarchically stored in said information recording device in accordance with the details of the parts of the body.

93. The information providing medium according to Claim 79, wherein

said control command includes a command to control to delete the measured data recorded with said information device when the authentication result based on said authentication command is dishonest a predetermined number of times.

94. An information processing system composed of a measuring device for measuring three-dimensional information on a body, an information recording device for recording measured data based on the three-dimensional information measured by said measuring device, and an information processing device for reading out the measured data from said information recording device and performing prescribed processing, wherein:

said information recording device comprises:

first storage means for storing measured data based on the three-dimensional information measured by said measuring device and protection information for protecting the measured data from being read out; and

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first interface means for performing interface processing of storing measured data based on the three-dimensional information output from said measuring device in said storage means and of reading out the measured data stored in said storage means to provide an external device; said measuring device comprises:

measuring means for measuring three-dimensional information on the body;

first input means for inputting protection information for protecting the measured data based on the three-dimensional information of the body from being read out from said information recording device; and

second interface means for outputting the measured data based on the three-dimensional information measured by said measuring means and protection information input by said input means, to said information recording device; and said information processing device comprises:

third interface means for performing interface processing of reading out the measured data and the protection information from said information recording device;

second input means for inputting authentication information for authenticating the reading-out of the measured data from said information recording device;

authenticating means for reading out the protection information from said information recording device through

said interface means and for performing authentication processing utilizing the authentication information input by said input means;

control means for controlling the reading-out of the measured data from the information recording device in accordance with the authentication result of said authenticating means; and

processing means for performing prescribed processing utilizing the measured data read out from said information recording device through said interface means under the control of said control means.

95. An information processing method in an information processing system composed of a measuring device for measuring three-dimensional information on a body, an information recording device for recording measured data based on the three-dimensional information measured by said measuring device, and an information processing device for reading out the measured data from said information recording device and performing prescribed processing, wherein:

an information processing method of said measuring device comprises:

a measuring step of measuring three-dimensional information on the body;

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a first input step of inputting protection information for protecting the measured data based on the three-dimensional information on the body from being read out from said information recording device; and

an output step of outputting the measured data based on the three-dimensional information measured by said measuring step and the protection information input at said input step, to said information recording device; and

an information processing method of said information processing device comprises:

a second input step of inputting authentication information for authenticating the reading-out of the measured data from said information recording device;

an authenticating step of reading out the protection information from said information recording device and of performing authentication processing utilizing the authentication information input at said input step;

a control step of controlling the reading-out of the measured data from said information recording device in accordance with the authentication result of said authenticating step; and

a processing step of performing prescribed processing utilizing the measured data read out from said information recording device under the control of said control step.

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96. An information providing medium for providing control information for executing processing for an information processing system composed of a measuring device for measuring three-dimensional information on a body, an information recording device for recording measured data based on the three-dimensional information measured by said measuring device, and an information processing device for reading out the measured data from said information recording device and performing prescribed processing, wherein:

control information which is provided said measured device includes:

a measuring command to measuring three-dimensional information on the body;

a first input command to input protection information for protecting the measured data based on the three-dimensional information on the body from being read out from said information recording device; and

an output command to output the measured data based on the three-dimensional information measured by said measuring step and the protection information input at said input step, to said information recording device; and

control information which is provided said information processing device comprises:

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a second input command to input authentication information for authenticating the reading-out of the measured data from said information recording device;

an authenticating command to read out the protection information from said information recording device and to perform authentication processing utilizing the authentication information input at said input step;

a control command to control the reading-out of the measure data from said information recording device in accordance with the authentication result of said authenticating step; and

a processing command to perform prescribed processing utilizing the measured data read out from said information recording device under the control of said control step.